Axis Print Servers
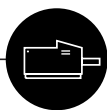
High Performance Multi-Protocol Print Servers for Virtually All Networks

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AXIS
COMMUNICATIONS

Read me First

To get your print server quickly up and running, follow the instructions below:

1. Connect the AXIS 560/660 to your network and to your printer as described in *Connecting the printer to the Network,* on page 7.

2. Proceed to the setup sections that are relevant to your network environment, as described in the table below:

Environment	Network Configuration	Action
NetWare	NDPS (Pure IP)	See *Assigning an IP Address*, on page 8 Proceed with *NetWare Using NDPS over IP*, on page 10
	NDPS (IPX)	See *NetWare Using NDPS over IPX*, on page 11
	Queue-based NetWare (Pure IP)	See *Assigning an IP Address*, on page 8 Proceed with *Queue-based NetWare Printing (Pure IP)*, on page 12
	Queue-based NetWare (IPX)	See *Queue-based NetWare Printing (IPX)*, on page 13
Windows 95/98 & NT	TCP/IP	See *Setup for Windows 95/98 & NT*, on page 14
	NetBIOS/NetBEUI	See *Setup for Windows 95/98 & NT*, on page 14
Windows 3.1/WfW	TCP/IP	See *Assigning an IP Address*, on page 8 Proceed with *Setup for Windows 3.1 & WfW*, on page 16
	NetBIOS/NetBEUI	See *Setup for Windows 3.1 & WfW*, on page 16
OS/2	TCP/IP	See *Assigning an IP Address*, on page 8 Proceed with *Setup for OS/2*, on page 18
	NetBIOS/NetBEUI	See *Setup for OS/2*, on page 18
Macintosh	AppleTalk	See *Setup for Macintosh*, on page 19
UNIX	TCP/IP	See *Assigning an IP Address*, on page 8 Proceed with *Setup for UNIX*, on page 21
Internet Printing	IPP	See *Using IPP*, on page 22

Management and Configuration

The tools that you should use to configure and manage the AXIS 560/660 are presented in *Management and Configuration*, on page 23.

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OS/2

Macintosh

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NetWare

Windows

OS/2

Macintosh

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Safety notices

Take some time to read through the safety notices before installing the AXIS 560/660. Please observe all safety markings and instructions when using this product.

Caution! - must be observed to avoid loss of data or damage to your equipment.

Important: - must be observed to avoid operational impairment.

Do not proceed any of the above notices, until you have fully understood the implications.

Electromagnetic Compatibility (EMC) USA - This equipment generates and radiates radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart B of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference. Shielded cables should be used with this unit to ensure compliance with the Class A limits.

Europe - This digital equipment fulfils the requirements for radiated emission according to limit B of EN55022/1994, and the requirements for immunity according to EN50082-1/1992 residential, commercial, and light industry (Compliance is not valid for unshielded network and printer cables). $C\epsilon$

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Year 2000 Compliance - Axis Communications warrants that all versions of the AXIS 560/660 with software versions 5.48 or later are Year 2000 compliant.

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Support Services - Should you require any technical assistance, please contact your Axis dealer. If your questions cannot be answered immediately, your Axis dealer will forward your queries through the appropriate channels to ensure you a rapid response.

If you are connected to Internet, you can find on-line manuals, technical support, software updates, application software, corporate information, etc., on any of the locations listed below.

WWW:	http://www.axis.com
FTP server:	ftp://ftp.axis.com/pub/axis

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Introduction

This document describes how to set up and manage the AXIS 560/660 in various network environments. Should you require more information, please refer to the AXIS 560/660 User's Manuals, which is available on the AXIS Online CD.

Unless stated otherwise, the AXIS 560 and AXIS 660 are collectively described as the AXIS 560/660 throughout this manual.

AXIS Online CD

The AXIS Online CD provides an easy-to-use electronic catalog, that includes all of the latest AXIS Utilities Software, Product Software, White Papers, User Documents, Technical References, etc. It is compatible for use within all of the supported Axis computing environments.

You can view the contents of the AXIS Online CD via an Adobe Reader interface or an HTML interface. However, all documents presented on the CD are in PDF format.

Note:

> If Adobe Acrobat Reader 3.0 is not installed on to your system, you can download it by clicking the Acrobat Reader button located on the starting page of the AXIS Online CD.

Axis official home page

The Axis home page is a good source for general information about Axis' products. This is located at **http://www.axis.com**. From this site you can access late product information, receive support information, learn more about other Axis products, etc.

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Product Overview

The AXIS 560 Print Server
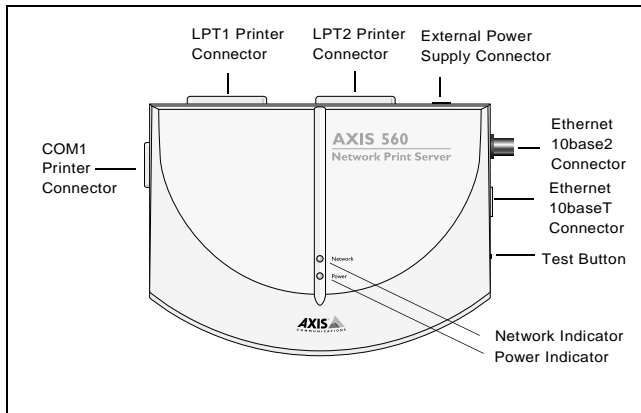
The AXIS 660 Print Server
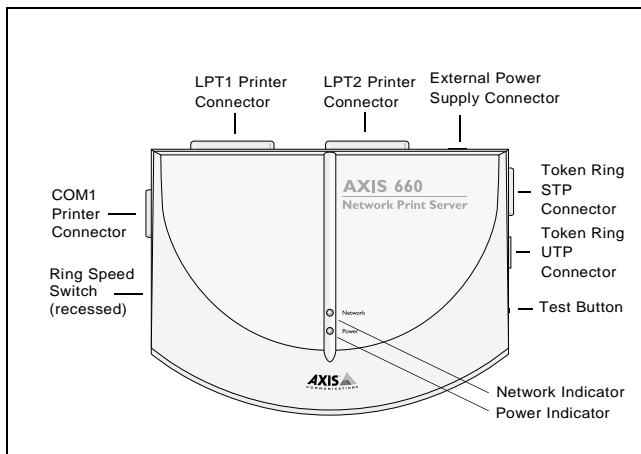
Note:

The AXIS 660 does not support Apple TokenTalk.

NetWare

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NetWare

Basic Installation

Hardware Inventory

Unpack and check all the items using the following check list. Contact your dealer if anything is missing or damaged. All packing materials are recyclable.

Windows

OS/2

Macintosh

Hardware		Model Variants	Part Numbers
Print Server		AXIS 560	0053-1
		AXIS 660	0054-1

Power Supply Type	AXIS 560 & AXIS 660 (PS-B)	Europe	13267
		UK	13268
		Australia	13269
		USA	13270
		Japan	13936

Media	Title	Part Numbers
CD	AXIS Online CD	Revision 5.3 or higher
Printed Materials	AXIS 560/660 User's Guide	17149

Optional Accessories	Description	Part Numbers
Cables	Serial Printer Cable	13281
	Parallel Printer Cable	13360

UNIX

Connecting the printer to the Network

Follow the instructions below to connect a printer to the network via the AXIS 560/660 print server:

Caution!

> The external power supply you are using must be marked with the correct mains voltage! Refer to *Hardware Inventory*, on page 6.

1. Make sure that the printer is switched off and that the AXIS 560/660 external power supply is disconnected.

2. Locate the serial number, found on the underside label of the AXIS 560/660, and write it down. You will need this number during the network configuration.
    Note:

    > Each AXIS 560/660 Print Server is pre-configured with a unique node address that is identical to the serial number.

3. Connect the printer to the LPT1, LPT2, or COM1 port on the AXIS 560/660 using an appropriate printer cable.

4. Connect your AXIS 560/660 to the network using either a twisted pair (10baseT) or thin wire (10base2) cable.

5. *For the AXIS 660 only:* Slide the Ring Speed switch to 4 or 16, as appropriate for your Token Ring network.

6. Switch on the printer and connect the external power supply to the AXIS 560/660. The power indicator light comes on. If the network indicator starts to flash, the AXIS 560/660 is successfully connected to the network.

7. Press and release the test button on the AXIS 560/660 to print a test page. If the AXIS 560/660 is correctly connected to the printer, the AXIS 560/660 internal test page will be printed.

    Note:

    > The AXIS 560/660 will print to the first printer it finds on its ports LPT1, LPT2 and COM1, in that order.

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Assigning an IP Address

To establish communication with the TCP/IP network, an IP address must be assigned to your AXIS 560/660. Choose an appropriate method from the table below:

| | Server Platform Availability | | | |
	UNIX	Windows	OS/2	NetWare
AXIS IP Installer		X		X
DHCP	X	X	X	X
ARP	X	X	X	X
BOOTP	X		X	X
RARP	X			

Note:

Refer to *Setup for Macintosh*, on page 19, for setting the IP address in the Macintosh environment.

All methods are enabled by default. This means that if you have a DHCP server running on your network, the AXIS 560/660 will receive an IP address immediately after you have connected it into the network.

AXIS IP Installer is a Windows utility that allows you to set the IP address of your AXIS 560/660. AXIS IP Installer is available on the AXIS Online CD. It can also be downloaded from the Axis WWW home page at **http://www.axis.com/**.

Refer to the AXIS 560/660 User's Manual for a more comprehensive description of the available methods.

Host Name Resolution

If you are using host names, you can map a unique host name to the IP address. The AXIS 560/660 supports WINS (Windows Internet Name Service) and DDNS (Dynamic Domain Name System), which are recommended to use for host name resolution when setting the IP address using DHCP.

WINS only supports 15 character long host names. If your host name is longer than 15 characters, your AXIS 560/660 truncates the host name to 15 characters when registering with a WINS server.

DDNS supports 53 character long host names, but they can only consist of the characters 'A-Z', 'a-z' and '-'. If your host name consists of any other characters, they are converted to '-', when registering with a DDNS server.

Refer to your system manuals or to your network administrator for instructions on how the host name resolution is performed on your system.

Notes:

The host name limitations conclude that if you want to register the same host name at a WINS server and a DDNS server, the host name should be no longer than 15 characters and it should only contain the characters 'A - Z', 'a-z' and '-'.

The host name of the AXIS 560/660 is specified by the PS_NAME parameter.

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NetWare

Setup for NetWare

NetWare Using NDPS over IP

Important:

> If you want to print in NDPS, make sure that you have NDPS software istalled on your NetWare file server.

Note:

> You can select to install the connected printers as Public or Controlled Access printers.

Having assigned an IP address to the AXIS 560/660 as described in, *Assigning an IP Address*, on page 8, you are now ready to install the AXIS 560/660 for NDPS printing over IP. Follow the instructions below:

1. Connect the AXIS 560/660 to the NetWare network, if it is not already connected. Refer to *Connecting the printer to the Network*, on page 7 for more information.

2. Start the NetWare Administrator. Create an NDPS Manager object, if you do not have one available.

3. Proceed to create the printer objects as Public or Controlled Access printers.

Please refer to the appropriate Novell documentation for instructions on creating NDPS Manager objects and the printer objects.

Notes:

> The HP_JETADMIN parameter of the AXIS 560/660 must be set to YES in order for the comunication between the AXIS 560/660 and th NDPS gateway to be enabled.
>
> NDPS requires that you run NetWare 4.11 or higher.
>
> During the creation of the printer object, you must choose the IP address of the AXIS 560/660.
>
> Depending on which port you have connected printer, you should enter LPT1, LPT2 or COM1 as your printer port when prompted during the creation of the printer object.
>
> To print using TCP/IP, Axis print server firmware 6.1 or later is required. In order to print using IPX/SPX, Axis print server firmware 5.51 or later is needed.

NetWare Using NDPS over IPX

Installing the AXIS 560/660 as a Public Access printer:

1. Make sure that the NDPS Gateway is configured to automatically create a Public Access printer.

2. Connect the AXIS 560/660 to the NetWare network, if it is not already connected. Refer to *Connecting the printer to the Network*, on page 7 for more information.

3. Use the AXIS NetPilot to set the HP_JETADMIN parameter of the AXIS 560/660 to YES. The HP_JETADMIN parameter must be set to enable communication between the AXIS 560/660 and the HP NDPS Gateway. Please refer to *Using AXIS NetPilot*, on page 24.

Please refer to the appropriate Novell documentation for instructions on creating NDPS Manager objects and the NDPS printers.

Notes:

You can also set the HP_JETADMIN parameter of the AXIS 540/640 to YES via any standard web browser. Please refer to *Using any standard Web browser*, on page 23.

The Public Access print servers are immediately available to everyone on the network.

The Axis Gateway will appear in NetWare 5.1 and later releases. To use the Axis Gateway with earlier versions of NetWare, you can download the Axis Gateway Configuration utility from www.axis.com.

To print using TCP/IP, Axis print server firmware 6.1 or later is required. In order to print using IPX/SPX, Axis print server firmware 5.51 or later is needed.

NetWare

Queue-based NetWare Printing (Pure IP)

Follow the instructions below to install the AXIS 560/660 in the NetWare Pure IP environment:

1. Start the Configuration Wizard from the User mode in the AXIS 560/660 Web interface.

2. Click your way through the Wizard until reaching the NetWare page. Make sure that the PSERVER_NDS parameter is set. If you want to change the parameter value or if the parameter value is empty, enter the desired values. The parameter value must include the tree or the preferred file server you want to login to and the print server name including the context.

3. Use NetWare Administrator to create the printer, print server and queue objects in the NDS tree.

4. Use the Add Printer Wizard to install the printer on your client. Note that only NDS queue based PSERVER printing is supported. When installing, choose **Network Printer** and browse to the queue you have just created. Alternatively, choose **Local Printer** and select the queue you have just captured.

Any configuration and management of the AXIS 560/660 can be performed from any standard Web browser. Please refer to *Using any standard Web browser*, on page 23.

Notes:

> If the PSERVER_NDS parameter includes the name of a tree and not a specific file server, RCONAG6.NLM must be running on at least one file server in the specified tree.
>
> If you have both IPX and IP enabled in your network, you can use AXIS NetPilot to install the AXIS 560/660 and to connect print queues. See *Queue-based NetWare Printing (IPX)*, on page 13.
>
> Pure IP requires that you run NetWare 5 or higher.

Queue-based NetWare Printing (IPX)

AXIS NetPilot is the recommended tool you should use when you are installing the AXIS 560/660 in the NetWare (IPX) environment. Install the AXIS NetPilot software if you have not already done so. It is supplied on the AXIS Online CD and can also be downloaded from the Axis WWW home page on **http://www.axis.com/**.

Note:

> The AXIS NetPilot software must be installed on a Windows platform running a NetWare client.

Follow the instructions detailed below to install your AXIS 560/660 using the AXIS NetPilot Installation Wizard:

1. Start AXIS NetPilot by double-clicking the AXIS NetPilot icon. The icon is located in the folder where AXIS NetPilot was installed.

2. Locate the AXIS 560/660 in the 'New Axis Units' folder. Select it and click the **Install** button on the AXIS NetPilot toolbar. If your network is large, it could take a few seconds before the print server appears in the folder.

3. Choose the **with Installation Wizard** option and click **OK**. The Installation Wizard will then guide you through the installation process.Should you require assistance with any of the operations click the Help icon and follow the instructions provided in the Help window.

4. After you have completed the installation, you must use the Add printer Wizard to install the printer on your client. When installing, choose **Network Printer** and browse to the queue you have just created. Alternatively, choose **Local Printer** and select the queue you have just captured.

5. When you have completed the instructions on the screen you are ready to print in your NetWare environment.

Connecting additional print queues

Follow the instructions below to enhance your installation by adding extra print queues:

1. Select the Network Print Server to be set up by clicking its icon.

2. Choose **Network** from the **Setup** menu or click the **Network** button on the toolbar.

3. Select the **NetWare** tab, select the printer port and click the **Connect...** button.

4. A new window opens that allows you to create new print queues and connect print queues to the AXIS 560/660.

Windows

Setup for Windows 95/98 & NT

TCP/IP Printing using AXIS Print System

AXIS Print System is the preferred utility for installing TCP/IP printer ports in Windows 95, Windows 98 and Windows NT 4.0 environments. It allows you to locate and install new network printers. If you choose Custom Installation while installing the AXIS Print System, you will be able to set the IP address of the AXIS 560/660 using the comprised AXIS IP Installer.

For peer-to-peer printing, AXIS Print System must be installed on all printing clients, while it is only necessary to install it on the server for client-server printing.

Install the AXIS Print System software, if you have not already done so. It is supplied on the AXIS Online CD. You can also download it from the Axis WWW home page at **http://www.axis.com/**. Once installed, the AXIS Print System is automatically initialized on system start-up.

To install a printer with the AXIS Print System, use the Installation Wizard that is available from the AXIS Print System user interface. If you need help, please see the AXIS Print System's built-in Help system or refer to the User's Manual.

Note:

For TCP/IP printing in Windows NT 3.5x environments, you should use AXIS Print Monitor.

NetBIOS/NetBEUI Printing using AXIS Print Monitor

For peer-to-peer printing, AXIS Print Monitor must be installed on all printing clients, while it is only necessary to install it on the server for client-server printing.

Install the AXIS Print Monitor software, if you have not already done so. It is supplied on the AXIS Online CD. You can also download it from the AXIS WWW home page at **http://www.axis.com/**. Once installed, the AXIS Print Monitor is automatically initialized on system start-up.

Important!

> As AXIS Print Monitor is an integral part of AXIS Print System, you should NOT install an independent version of AXIS Print Monitor if AXIS Print System is already installed on your client.

To install a printer with the AXIS Print Monitor, use the Microsoft Add Printer Wizard, which is available in your Windows operating system. The AXIS Print Monitor's built-in Help system describes, in step-by-step fashion, how to install your printers as NetBIOS/NetBEUI, LPR or Raw TCP/IP printer ports. If you need help, start the AXIS Print Monitor Help system from the AXIS Utilities folder or see the User's Manual.

Note:

> As the AXIS 560/660 emulates the behavior of a local printer port, you must select the Local Printer (Windows 95 and Windows 98) or My Computer (Windows NT) alternative when performing the instructions in the Add Printer Wizard.

Windows

Setup for Windows 3.1 & WfW

TCP/IP Printing

To enable TCP/IP printing in Windows 3.1 and Windows for Workgroups environments, it is recommended that you use a shareware LPR spooler that can be downloaded from **ftp://ftp.axis.com/pub/axis/software/prt_srv/utility/wlprs/**.

NetBIOS/NetBEUI Printing

AXIS Print Utility for Windows is the preferred tool for NetBIOS/NetBEUI printing in Windows 3.1 and Windows for Workgroups environments.

Install the AXIS Print Utility for Windows software, if you have not already done so. It is supplied in the *software\prt_srv\utility\axpuw\1.04* folder on the AXIS Online CD. You can also download it from the Axis WWW home page at **http://www.axis.com/**.

Peer-to-peer printing - This print method is recommended for smaller networks and requires that all users install the AXIS Print Utility for Windows on their workstations. Follow these steps to install your AXIS 560/660 for peer-to-peer printing at a Windows for Workgroups or Windows 3.1 workstation:

1. Double-click the AXIS Print Utility icon.

2. In the **Port** menu, click **Add**. In the NPS Port list, select the AXIS 560/660 port to be installed. The ports appear as `<name>.LP1`, `<name>.LP2`, and `<name>.CM1`, where `<name>` is either `AX` followed by the last six digits of the AXIS 560/660 serial number or a name you have previously given the AXIS 560/660. For example: `AX100B35.LP1` or `DevDept.LP1`.

3. Accept or change the suggested Windows port name, and type any comments in the Description field. Make a note of the Windows port name as you will need this later. Click **OK** to install the Windows port.

4. In the **Port** menu, click **Connect** to bring up the Windows Printers dialog.

5. Select a printer driver from the list of Installed Printers, or click **Add**>> to install a new driver. Click **Connect...**

6. Select the Windows port name, defined in step 3, from the Ports list.

7. Click **OK** to close the Connect dialog, and **Close** to close Printers.

Notes:

> Windows 3.1 will require network support such as LAN Server or LAN Manager Workstation software to be installed in order to redirect a local printer port to a network device.
>
> AXIS Print Utility for Windows must be running when you print through the AXIS 560/660. We strongly recommend that you copy the AXIS Print Utility icon to your Windows StartUp folder.

Windows

Client-server printing - This print method is suitable for larger networks and requires only one user to install the AXIS Print Utility for Windows software onto their workstation. The setup procedure is described below:

1. Install AXIS Print Utility for Windows onto the file server.

2. Set up your AXIS 560/660 from the file server as described in *Peer-to-peer printing,* on page 16, but you must additionally check the **Share** box for your printer. Please refer to your Windows documentation for further instructions.

Your shared printers can now be used by all Windows clients and you do not need to install the AXIS Print Utility for Windows on the clients.

Important:

> The server setup described above should only be made on a Windows for Workgroups workstation.

Setup for OS/2

TCP/IP Printing

The AXIS 560/660 supports LPR Printing in the OS/2 environment.

Installing the AXIS 560/660

Follow the instructions below to install the AXIS 560/660 using the lprportd service method:

1. Open the **OS/2 System** window, select **TCP/IP** and **TCP/IP Configuration**.

2. Select **Printing**, type a number, e.g. 3, in the **Maximum number of LPD ports** field. The Remote print server and Remote print server's printer fields should remain empty.

3. Select **Autostart**, select **lprportd**, click the **Autostart** check box and select **Detached**.

4. Exit and Save.

5. Restart your OS/2 client.

Creating a print queue

Continue with the instructions below to create a print queue:

1. Open the **Template** group. Create an new printer from Templates by dragging the **Printer** icon to the desktop with the right mouse button.

2. Select a printer driver and double-click the **Output port** named \PIPE\LPD0.

3. Enter the host name or the IP address of the AXIS 560/660 in the **LPD server** field.

4. Enter one of the AXIS 560/660 logical printer names, e.g. pr1, in the **LPD printer** field.

NetBIOS/NetBEUI Printing

AXIS Print Utility for OS/2 is the preferred tool for NetBIOS/NetBEUI printing in OS/2 environments. Install AXIS Print Utility for OS/2, if you have not already done so. It is available on the AXIS Online CD in the *software\prt_srv\utility\axpu\1_16* folder. You can also download it from the Axis WWW home page at **http://www.axis.com/**. Please refer to the User's Manual for more information.

Setup for Macintosh

Note:

> Only AXIS 560 supports printing in the Macintosh environment.

Follow the instructions below to choose a printer:

1. Open the **Chooser** from the **Apple** menu.

2. Click the **LaserWriter**, alternatively the **LaserWriter 8.0** Icon.

3. If your network has more than one zone, click the name of the default zone. If your network has no zones, this box does not appear.

4. Click the name of the printer you want to use. The default printer name is shown as: AXIS<nnnnnn>_<port>, where <nnnnnn> is the last six digits of the serial number, and <port> is LPT1, LPT2, or COM1 respectively.

5. For LaserWriter 8.0 printer driver only:

    Click **Setup...**, and then Select **Auto Setup**. If the printer, as well as the print server, supports bi-directional printing the installation will be automatically performed. If not, you will be prompted to select a PPD file matching your printer. Click **OK**.

6. Click the **Close** box. This completes the configuration.

Repeat this procedure for each Macintosh using the AXIS 560/660.

Macintosh

Setting the IP address

Follow the step-by-step procedure below to set the IP address, enabling access to the AXIS 560 via any standard Web browser:

1. Open the Chooser and select a network printer driver, any LaserWriter will do.

2. Select the Axis printer port which name ends with "_CFG" and close the Chooser.

3. Open a text editor, e.g. SimpleText and write a text file containing the following:

    INT_ADDR: <IP address>
    Example:

    > INT_ADDR: 171.16.2.143

4. Print the above text file. The settings will be stored in the AXIS 560.

5. Open the Chooser and select the printer port you wish to use for printing documents. Close the Chooser.

Note:

> The _CFG port disappears 60 minutes after the AXIS 560 has been powered on. If you want it to reappear, you must restart the AXIS 560.

Macintosh

Setup for UNIX

Before you start:

> To establish communication with the TCP/IP network, you must assign an IP address to your AXIS 560/660 Print Server. Refer to *Assigning an IP Address,* on page 8.

Having performed the basic TCP/IP setup procedures, you are now able to print in interactive mode using FTP or Reverse Telnet protocols. However, if you want to integrate the AXIS 560/660 into your host spooler, you can use the Axis automatic installation script *axinstall.* This utility software is resident on the AXIS 560/660 and can be downloaded to your host using FTP. It is also provided on the AXIS Online CD in the *software\prt_srv\utility\axinstall\latest* folder and from the Axis WWW home page at **http://www.axis.com/**.

Follow the procedure below to download *axinstall* to your host using FTP:

1. Log in to the AXIS 560/660 by typing:
    `ftp <host name>` or `ftp <IP address>` in the UNIX shell window.

2. Enter `root` as the user id and `pass` as the password.

3. Download the *axinstall* utility by typing:
    `get axinstall`

Follow the procedure below to install the AXIS 560/660 using the *axinstall* script:

1. Type the command:
    `sh axinstall` in the UNIX shell window.

2. Follow the instructions that appear when the script is started.

When the AXIS 560/660 is installed, it will appear as it is directly connected to the host printer spooler.

UNIX

NetWare

Windows

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UNIX

Using IPP (only for AXIS 660)

You can use IPP (Internet Printing Protocol) for printing over any LAN or WAN that supports TCP/IP. The Axis Print Server IPP functionality is platform-independent and is automatically activated upon installation.

Note:

Currently available IPP clients include:

- the Internet Printer Connection software from Hewlett Packard for WindowsNT,

- the Microsoft IPP Client delivered with Windows 2000,

- IPP clients for Windows '95 and '98 that can be downloaded from the Microsoft web site.

- the Common Unix Printing System for Unix/Linux environments.

The Axis print server with integrated IPP is compatible with any 1.0 and 1.1 compliant IPP client. The AXIS 660 Print Server presents IPP Printer objects to the client, one for each printer port.

Notes:

Axis firmware including IPP can be down-loaded free of charge from the Axis website http://www.axis.com.

If there are one or more firewalls between the IPP Client and the server, you may have to make some changes to the firewall configuration. IPP uses TCP port 631 for printing, so any firewalls between client and server must be configured to allow bi-directional traffic on that port.

In order to print to a remote printer via IPP, simply direct your print job to the printer by means of the supported `http:` address scheme (which is used in the IPP 1.0 standard), or the `ipp:` address scheme (used in the IPP 1.1 standard).

Example: http: address scheme

IPP address using host name	IPP address using IP address	Corresponding printer
http://axisps:631/LPT1	http://12.100.110.2:631/LPT1	Printer attached to the LPT1 parallel port

See the Axis 660 User's Manual for more examples on `http:` and `ipp:` address schemes. Information on how to add an IPP printer to your printer list in Windows environments can also be found in the User's Manual.

Management and Configuration

Using any standard Web browser

Having assigned an IP address to your AXIS 560/660, you can configure and manage your print server from any standard Web browser.

Access your AXIS 560/660, simply by entering the host name or the IP address of the AXIS 560/660 as a URL in your browser, as follows:

Examples:

```
http://192.36.253.96
http://salesdept
```

From the internal home page, links to configuration, management, status and statistics services are readily available.

Using AXIS ThinWizard

The AXIS ThinWizard management tool allows you to manage and upgrade multiple ThinServer products. You can find, monitor and upgrade your Axis print servers remotely in any TCP/IP network using any standard Web browser.

The internal home pages of Axis ThinServer products integrate directly into AXIS ThinWizard, giving you direct access to the services described in *Using any standard Web browser* above.

Install AXIS ThinWizard on a designated server in your network. The AXIS ThinWizard software is available on the AXIS Online CD, but can also be downloaded from the Axis WWW home page at **http://www.axis.com/**.

Follow the instructions below to use AXIS ThinWizard:

1. Start a Web browser from a client in your network.

2. Enter the IP address or the host name of the server, where you installed AXIS ThinWizard.

3. Enter the user id and the password and click the **Log in** button.

4. The AXIS ThinWizard interface appears. Select a network group from the list. If the list is empty, you must first create a group. In that case, just click the Network Groups button and follow the instructions.

Please refer to the AXIS ThinWizard on-line help for more information about how to use AXIS ThinWizard.

NetWare

Windows

OS/2

Macintosh

UNIX

NetWare

Windows

OS/2

Macintosh

UNIX

Using AXIS NetPilot

The AXIS NetPilot configuration software provides an alternative tool for conveniently configuring and monitoring of the AXIS 560/660. It can be installed on Windows platforms running NetBIOS/NetBEUI or NetWare clients running IPX.

The AXIS NetPilot software is available on the AXIS Online CD and can also be downloaded from the Axis WWW home page at **http://www.axis.com/**.

AXIS NetPilot provides two tools for changing the parameters. The **Property Pages** provide a user-friendly interface and are ideal if you have little experience in editing the parameters. The **Parameter List Editor**, on the other hand, is a very fast and effective tool, which can be used if you have considerable experience in editing the parameter list. This tool also enables batch configuration of your print servers.

Property pages:

Follow the instructions below to open and edit an arbitrary Property Page:

1. Select the AXIS 560/660 from the **Network Print Servers** folder.

2. Select **Properties** from the **Setup** Menu or click the **Properties** button on the AXIS NetPilot toolbar.

3. Select the tab that includes the parameter you want to change.

4. Change the value. Click **Apply** to save the change to the print server. If you select **OK** instead, the Property pages close after the change has been saved.

Please refer to the AXIS NetPilot on-line help or the User's manual for more information about how to use AXIS NetPilot.

Using FTP

Having assigned an IP address to your AXIS 560/660, as described in *Assigning an IP Address*, on page 8, you can use FTP for configuring your print server.

Follow the instructions below to edit the *config* file using FTP:

1. Log in to the AXIS 560/660 by typing the command:
   `ftp <host name>` or `ftp <IP address>` in a DOS window (Windows), in a OS/2 window or in a UNIX shell window.

2. Enter the user id and the password. (The default entries are `root` and `pass`.)

3. Download the *config* file to your host by typing:
   `get config`

4. Edit the file using your preferred text editor.

5. Save the *config* file to the print server by typing:
   `put config CONFIG`

Note:

It is important that the destination file name is specified in capital letters. Otherwise the edits are only temporary and will be lost when the AXIS 560/660 is powered down.

By using the same set of instructions you can also fetch the *status* file and the *account* file from the AXIS 560/660. By typing `help` in step 3 above, a list of all available files and commands will be displayed.

Using Telnet

Having assigned an IP address to your AXIS 560/660, as described in *Assigning an IP Address*, on page 8, you can use Telnet for managing your print server.

Follow the instructions below to view the *account* file using Telnet:

1. Log in to the AXIS 560/660 by typing:
   `telnet <host name>` or `telnet <IP address>` in a DOS window (Windows 95/98/NT) or in a UNIX shell window. In a OS/2 window you should replace the `telnet` command with `telnetpm`.

2. Enter the user id and the password. (The default entries are `root` and `pass`.)

3. View the *account* file by typing:
   `account`

By using the same set of instructions you can also view the *status* file, perform soft resets, hard resets and set the print server parameters to default settings. By typing `help` in step 3 above, a list of all available commands will be displayed.

NetWare

Windows

OS/2

Macintosh

UNIX

NetWare

Using the Test Button

The following operations can be performed by pressing the test button in different sequences. Please refer to *Product Overview*, on page 5, to identify the location of the test button.

Printing a test page:

Windows

• Press the test button once to print a test page.

Printing the parameter list:

• Press the test button twice to print the parameter list.

Resetting the AXIS 560/660 parameters to the factory default settings:

OS/2

1. Remove the external power supply to switch off the AXIS 560/660.

2. Press and hold down the test button, while you reconnect the external power supply. Continue to hold down the test button until the network indicator starts to flash at one second intervals. This should take about 5 seconds.

Macintosh

3. Release the test button and wait until the network indicator flashes at least five times.

4. Press and hold down the test button again until the network indicator remains constantly lit.

5. Restart the AXIS 560/660 by disconnecting and reconnecting the external power supply.

UNIX

Note:

All parameters except the node address (NODE_ADDR.), the IP address (IP_ADDR.) and DHCP enabled or disabled (DHCP_ENABLE.) are reset.

Please refer to the AXIS 560/660 User's Manual for more information about the test button.

Using SNMP

You can use SNMP (Simple Network Management Protocol) for remote monitoring and configuration of the AXIS 560/660. All major functions applicable to print servers are supported.

The AXIS 560/660 supports all relevant parts of MIB-II and the host resource MIB. It also includes a private enterprise MIB called AXIS MIB. To make the full use of the SNMP support you must have an SNMP tool that allows you to install private enterprise MIBs.

The AXIS MIB can be downloaded from:

- the */software/prt_srv/utility/mib/1_14* folder on the AXIS Online CD.
- the Axis WWW home page at **http://www.axis.com/**.
- the AXIS 560/660 using FTP.

Follow these steps to add the AXIS MIB to your SNMP software:

1. Log in to the AXIS 560/660 using FTP.

2. Download the MIB file */snmp/axis.mib* to the SNMP host.

3. Install the AXIS MIB according to instructions in your SNMP software documentation.

Using HP Administration Tools

The AXIS 560/660 is compatible with the HP JetAdmin and the HP Web JetAdmin printer management software. This means that you may use either tool to install and configure your printer devices via your AXIS 560/660 print server. You can also use them to monitor the current status of your AXIS 560/660 and other HP JetAdmin- or HP Web JetAdmin-compatible devices connected to your network.

However, to enable support for the HP administration tools, you must set the HP_JETADMIN parameter of the AXIS 560/660 to YES.

Important:

Even though the AXIS 560/660 is compatible with the HP JetAdmin tool, it behaves slightly different than an HP print server in certain situations. Please refer to the AXIS 560/660 User's Manual, available on the AXIS Online CD, for further information.

NetWare

Windows

OS/2

Macintosh

UNIX

NetWare

Windows

OS/2

Macintosh

UNIX

Using Novell Utilities

After installing the AXIS 560/660 into the NetWare environment, with AXIS
NetPilot, you can manage your AXIS 560/660 using Novell's NetWare
Administrator or PCONSOLE.

These tools allow you to:

- restart the AXIS 560/660
- view the status of the AXIS 560/660
- connect and disconnect print queues to the AXIS 560/660
- set notifications

Please refer to the appropriate Novell documentation for further information about
NetWare Administrator and PCONSOLE.